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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,113	01/26/2001	Dasari Jagadish Kumar	7416/78222 - PPA 2	6902
24628	7590	02/27/2006	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			PHU, PHUONG M	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No. 09/771,113	Applicant(s) KUMAR ET AL	
Examiner Phuong Phu	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-35 and 40-62 is/are pending in the application.
4a) Of the above claim(s) 13-35 and 40-53 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 54-62 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the Amendment filed on 2/8/06.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 54-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yip et al (5,896,452) in view of Gambuzza (6,226,321) (both previously cited), or unpatentable over Yip et al in view of Gambuzza, and further in view of Allen, "CMOS Analog Circuit Design", published by Saunders College Publishing, 1987, pages 198-200 (newly-cited).

-Regarding to claim 54, see figure 1 and col. 2, line 39 to col. 4, line 50, Yip et al discloses a transmitter (considered equivalent with the limitation "high speed communication transmitter" wherein the transmitter comprises

a line driver (comprising (TRANSMIT PATH) selectively coupled to a transmission line (TWO-WIRE LINE),

wherein the transmitter presents a high impedance to the transmission line and is in a high impedance state with respect to the normal line impedance of the transmission line when the line driver is not coupled to the transmission line because the transmitter then acts as an open circuit.

Yip et al does not discloses that the transmitter has an impedance substantial equal to the normal impedance of the transmission line and presents a normal impedance to the transmission

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line and is in a normal impedance state when the line driver is coupled to the transmission line, as claimed.

Gambuzza discloses a transmission line interface (200) which connects a transmitter to a transmission line (212), and includes a matching circuit (R1, R2) to make the impedance of the transmitter match with the impedance of the transmission line so that the transceiver presents an impedance to the transmission line that is substantially equal to the impedance of the transmission line (see figure 2 and col. 4, lines 34-55).

Yip et al disclose a transmission line interface (12) for coupling the transmitter to the transmission line (see figure 1).

Since Yip et al does teach in detail how the transmission line interface (12) is implemented, therefore, for an application for implementing the transmission line interface (12), it would have been obvious for a person skilled in the art to implement Yip et al in such a way that the transmission line interface (12) would be implemented as a transmission line interface which include a matching circuit, as taught by Gambuzza, in order to make the impedance of the transmitter substantially equal to the normal line impedance so that the impedance of the transmitter would be matched with the normal line impedance of the transmission line when the transmitter is coupled to the transmission line interface for optimizing the power transfer from the transmitter to the transmission line.

Based on the above rationale, it can be said that with such the implementation, Yip et al in view of Gambuzza teaches that the transmitter has an impedance substantial equal to the normal impedance of the transmission line and presents a normal impedance to the transmission

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line and is in a normal impedance state when the line driver is coupled to the transmission line, as claimed.

Further, In Yip et al in view of Gambuzza, Yip et al teaches that the line driver is selectively coupled to the transmission line via a switching device (20) (see figure 1). When the line driver is not coupled the transmission line, the switching device introduces an open circuit between the line driver and the transmission line. This open circuit can be considered here equivalent with the limitation "a resistor coupled to the transmission line, the resistor having a high impedance with respect to the normal impedance of the transmission line" because the resistances of open circuits are infinitive.

In an alternative, if Yip et al in view of Gambuzza does not inherently teaches a resistor coupled to the transmission line, the resistor having a high impedance with respect, as claimed.

Allen teaches that a switching ON/OFF between two terminals A and B can be implemented with a MOS switch which is useful for multiplexing applications wherein the switch comprises a resistor R_{OFF} whose impedance is infinitive (see figure 5.1-1, and page 199).

Since Yip et al in view of Gambuzza does not teach in detail how the switching device (20) is implemented, for an application for implementing the switching device, it would have been obvious for one skilled in the art to implement Yip et al in view of Gambuzza in such a way that the switching device (20) would comprises a MOS switch having a resistor R_{OFF} whose impedance is infinitive, as taught by Allen, so that via MOS switch of the switching device (20), the line driver would be selectively coupled to the transmission line, as required.

In Yip et al in view of Gambuzza and Allen, the resistor resistor R_{OFF} can be considered equivalent with the limitation "a resistor" as claimed.

-Regarding to claim 55, Yip et al discloses that the line driver is selectively coupled to the transmission line by a first switch (20) (see figure 1).

-Regarding to claim 56, Yip et al discloses that the first switch includes mechanical contacts (20) (see figure 1).

-Regarding to claim 57, Yip et al discloses that the switch includes electromechanical relays (20) to relay path (REF(n)) between path (TRANSMIT PATH) and path (TS(n)) (see figure 1).

-Regarding to claim 58, Yip et al discloses that the switch is an electronic switch (see figure 1).

-Regarding to claim 59, Yip et al discloses that the switch includes a filter (14, 16) (see figure 1); and further, switch (20) of the switch device inherently operates on a particular operating frequency bandwidth specified by the design of the switch and does not operate beyond that particular operating frequency bandwidth, therefore, the switch can be considered as a filter over that particular operating frequency bandwidth.

-Regarding to claims 60-62, Yip et al in view of Gambuzza, or Yip et al in view of Gambuzza and Allen does not disclose whether the switch is manually controllable, automatically controllable by hardware or automatically controllable by software. However, using a switch of manually controllable, automatically controllable by hardware or automatically controllable by software for switching a signal is well-known in the art, and the examiner takes Official Notice. Since Yip et al in view of Gambuzza or Yip et al in view of Gambuzza and Allen does not teach in detail how to implement the switch, therefore, for an application for implementing the switch, it would have been obvious for a person skilled in the

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art to implement the switch device as a switch manually controllable, automatically controllable by hardware or automatically controllable by software so that via the switch ,the line driver would be selectively coupled to the transmission line, as required.

Response to Arguments

3. Applicant's arguments filed on 2/8/06 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2/21/06

Phuong Phu

Phuong Phu

**PHUONG PHU
PRIMARY EXAMINER**

Phuong Phu
Primary Examiner
Art Unit 2631